

loon-tip Swan-Ganz catheter for measurement of hemodynamics. The immediate response to vasodilators can then be titrated to achieve an optimal dosage schedule before a patient is discharged from hospital. In patients with mitral regurgitation, both arteriolar and venodilators have been particularly beneficial. The administration of these drugs decreases the regurgitant fraction and left atrial pressure while increasing forward cardiac output. Because many patients with chronic congestive heart failure have some degree of mitral regurgitation, vasodilators are a particularly attractive form of adjunctive therapy in this subgroup.

In summary, vasodilator drugs provide an important form of adjunct therapy in patients with severe, chronic congestive heart failure. Available drugs are effective, and new drugs are being evaluated. Results to date suggest that this form of therapy has a permanent place in the pharmacological management of heart failure.

WILLIAM W. PARMLEY, MD  
KANU CHATTERJEE, MB, FRCP

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## Resurgence of Plague

IN RECENT YEARS there has been an increasing incidence of plague reported from endemic areas of the western United States. This is due in part to natural fluctuations of the plague reservoir involving the organism (*Yersinia pestis*), its vector (fleas) and hosts—small mammals indigenous to the region. However, a more important reason for this increase is greater contact between humans and animals carrying the disease. Many cases occur on Indian reservations where the life-styles of the Native Americans bring them into closer contact with the sources of infection. However, increased popularity of rural life-styles as well as backpacking and camping activities has increased the incidence of plague in other than Native Americans. Therefore, physicians practicing in urban and nonendemic areas also need to be aware of the possibility of the disease occurring in patients who have visited endemic areas.

The disease has an incubation period of two to

six days, followed by initial manifestations such as malaise, fever, and pain and swelling in the area of regional lymph nodes (usually inguinal or axillary). Progression of the disease is variable; however, in most untreated patients septicemia develops. Pneumonic forms are unusual but do occur.

Diagnostic efforts should be expeditious, including aspiration of lymph nodes (buboes), cultures of blood and sputum, and examination of cerebrospinal fluid. Aspirated material should be stained with Wayson or Giemsa stains to delineate the bipolarity of the organism. A fluorescent antibody method is available for rapid presumptive diagnosis. Serologic testing can be done for later confirmation.

Streptomycin is the antimicrobial drug of choice. Tetracycline and chloramphenicol are good alternative drugs. Studies are underway to determine the efficacy of other aminoglycosides. Usual supportive measures should be used for controlling endotoxic shock that may complicate septicemia due to plague. The patient should be isolated and his or her contacts found and treated with antimicrobial prophylaxis where appropriate.

EDWARD A. KOMPARE, MD

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## Pneumococcal Polysaccharide Vaccine

WITH THE ADVENT of effective antibiotic therapy in the late 1940's, there has been less concern with pneumococcal infections. However, the problem has not disappeared and, in spite of the effectiveness of treatment, more than 400,000 cases of pneumococcal pneumonia occur annually in the United States, with a mortality of between 5 percent and 10 percent. This means that as many as 40,000 people a year die from pneumococcal pneumonia. It is also estimated that there are between 3,000 and 5,000 cases of pneumococcal meningitis each year, and that approximately 6 percent of these cases are fatal. At least 83 types of pneumococci are responsible for the infections,